

Atty. Docket No. YOR-2000-0006
(590.006)

REMARKS

In the Office Action dated June 14, 2004, pending Claims 3-11 and 14-23 were rejected and the rejection made final. In response Applicants have filed herewith a Request for Continued Examination and have rewritten Claim 8. The amendment to Claim 8 is made merely to expedite prosecution; no change in scope is intended by Applicants. The Office is respectfully requested to reconsider the rejections presented in the outstanding Office Action in light of the following remarks.

Applicants and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner. On September 14, 2004, one of the inventors, Jiri Navitrili, and Applicants' counsel conducted a telephone interview with the Examiner in which the applied references and the pending claims were discussed. While no agreement was reached with respect to the claims, it was agreed the Examiner would schedule another telephone interview prior to the issuance of another Office Action..

Claims 3-11 and 14-23 were pending in the instant application at the time of the outstanding Office Action. Claims 3, 14, and 23 are independent claims; the remaining claims are dependent. Claims 3-11 and 14-23 now stand rejected under 35 U.S.C. 103(a) over Picone et al. (hereafter "Picone") in view of Setlur et al. (hereafter "Setlur") in further view of O'Shaughnessy. The Office has admitted that not one of these references describe the present invention, but claims that combination of the teachings of these references would be obvious to a person skilled in the art. This is not supported by the

Atty. Docket No. YOR-2000-0006
(590.006)

references. Reconsideration and withdrawal of the present rejection is therefore respectfully requested.

The present invention generally relates to methods and apparatus for verifying spoken passwords and sentences. (Page 1, lines 3-5) In accordance with at least one presently preferred embodiment of the present invention, a proposed method permits the verbal verification of a spoken password sentence (as opposed to the use of acoustic thresholds) to verify a spoken password sentence without computationally extensive large-vocabulary decoding. (Page 3, lines 9-12) A decoder preferably uses target baseforms (representing the original content to be verified) together with a special set of competing simplified baseforms that may be easily constructed using finite-state grammars (FSG). (Page 3, lines 12-15) Thus, in accordance with at least one embodiment of the present invention, a significant difference with respect to previous efforts is that the implicit password search within the decoder allows for a very low decoding complexity. (Page 12, lines 15-17)

As best understood, Picone et al. appears to be directed to a voice log-in system based on a person's name input only, using speaker-dependent **acoustic** name recognition models in performing speaker-independent name recognition. (Abstract; emphasis added) There simply is no teaching or suggestion of using finite state grammars as in the present invention.

As best understood, Setlur et al. appears to be directed automatic speech recognition and particularly to a method and apparatus for verifying one or more words of

Atty. Docket No. YOR-2000-0006
(590.006)

a sequence of words. (Col. 1, lines 6-8) "Likelihood ratios" or acoustic scores or used to determine whether a spoken string will be accepted or rejected. (Col. 3, lines 4-30) In this regard it should be noted that the spoken "strings" of Setlur et al. appear to be nothing more than concatenations of various acoustic models. Again, there simply is no teaching or suggestion of using finite state grammars as in the present invention. Instead, Setlur et al. appears to utilize a classic approach to acoustic scoring.

The use of acoustic scores is discussed in the Background section of the present application. As set forth therein, conventional methods and apparatus for verifying spoken passwords and sentences employ "acoustic likelihoods" resulting from a decoding process. An acoustic likelihood is the probability that a spoken password or sentence actually matches a given target password or sentence. (Page 2, lines 3-6) The present application continues, that conventionally, acoustic likelihoods are typically normalized on an utterance basis, while predetermined thresholds are applied for purposes of verification (i.e., should a verbal utterance meet a certain threshold in terms of the degree to which it matches a target word or phrase, based on given factors, it is construed as sufficiently matching the target word or phrase). (Page 2, lines 7-11) The application then goes on to discuss the limitations of using acoustic likelihoods overcome with the use of finite state grammars in the present invention.

As best understood, O'Shaughnessy is a textbook which discusses the design of grammars to improve the accuracy of speech recognition. As noted in O'Shaughnessy, "[t]he *grammar* or structure of permitted phoneme sequences raises recognition accuracy". (Page 468; emphasis in original) There is, however, simply is no teaching or

Atty. Docket No. YOR-2000-0006
(590.006)

suggestion in O'Shaughnessy of using finite state grammars rather than acoustical scoring for comparing a verbal utterance and a target password on a text level as is contemplated by the present invention.

The instantly claimed invention requires specifically "a finite state grammar generator which generates a finite state grammar to be employed by ..." "a decoder which transforms a verbal utterance into decoded text for being compared to the at least one target password sentence in said acceptance arrangement". (Claim 1; emphasis added) Similar language appears in the other independent claims. At a minimum, using a finite state grammar in comparing a target password sentence is simply not taught or suggested by either Picone et al., Setlur et al., or O'Shaughnessy.

While the outstanding rejection is based on the combination of Picone et al., Setlur et al., and O'Shaughnessy, nearly twenty years ago, the Court of Appeals for the Federal Circuit recognized the importance of the individual references in characterizing the holding of *In re Imperato*, 179 USPQ 730 (C.C.P.A. 1973), as follows:

The lesson of this case appears to be that prior art referenced in combination do not make an invention obvious unless something in the prior art references would suggest the advantage to be derived from combining their teachings.

Again, in *ACS Hospital Systems, Inc. v. Montifore Hospital*, 221 USPQ 929 (Fed. Cir. 1984), the Court stated:

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of reference can be combined **only** if there is some suggestion or incentive to do so. The prior art of record fails to provide any such suggestion or incentive.

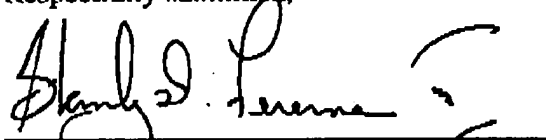
Atty. Docket No. YOR-2000-0006
(590.006)

Accordingly, we hold the Court below erred as a matter of law in concluding the claimed invention would have been obvious to one of ordinary skill in the art under section 103.

These Federal Circuit teachings are especially cogent here given the combination of Picone et al., Setlur et al., and O'Shaughnessy fails to teach or suggest the instantly claimed invention.

In view of the foregoing, it is respectfully submitted that Claims 3-11 and 14-23 fully distinguish over the applied art and are thus in condition for allowance. By virtue of dependence from what is believed to be allowable independent Claims 3 and 14, it is respectfully submitted that Claims 4-11 and 15-22 are also presently allowable. Notice to the effect is hereby earnestly solicited. If there are any further issues in this application, the Examiner is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Stanley D. Ference III
Registration No. 33,879

Customer No. 35195
FERENCE & ASSOCIATES
400 Broad Street
Pittsburgh, Pennsylvania 15143
(412) 741-8400
(412) 741-9292 - Facsimile

Attorneys for Applicants